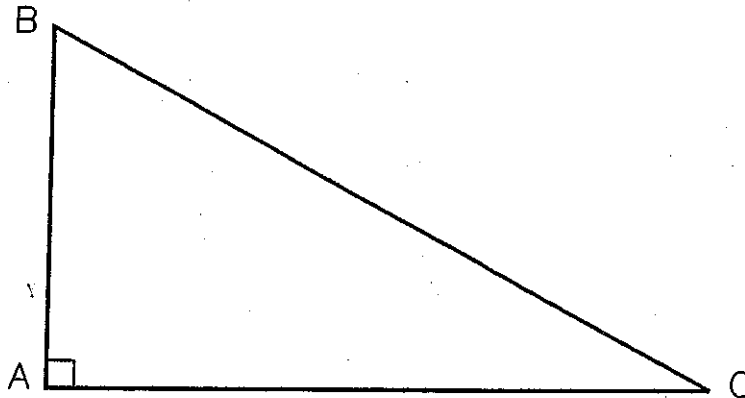


TRIG-STAR PROBLEM LOCAL CONTEST

**TRIGSTAR
#3**

PRINT NAME: _____



KNOWN: DISTANCE AC = 592.25 DISTANCE BC = 783.15

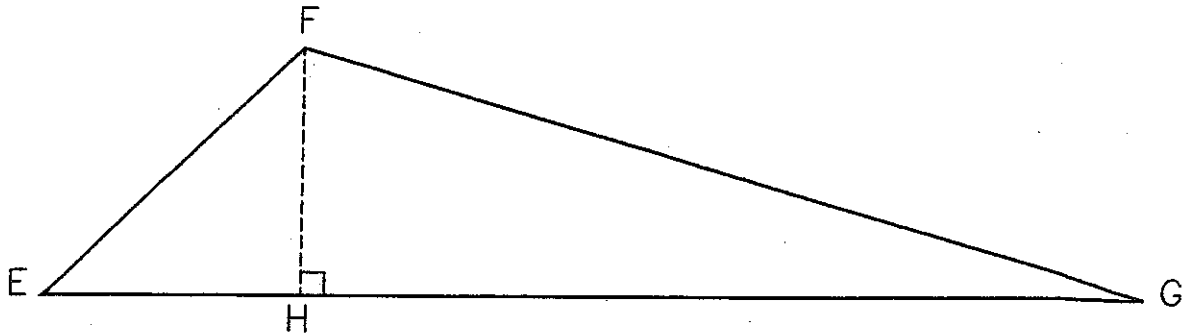
FIND: \angle ACB = _____ (5 POINTS)

DISTANCE AB = _____ (5 POINTS)

REQUIRED ANSWER FORMAT

DISTANCES: NEAREST HUNDREDTH
 ANGLES: DEGREES-MINUTES-SECONDS
 TO THE NEAREST SECOND

TRIG-STAR PROBLEM LOCAL CONTEST



KNOWN: DISTANCE EF = 343.12 \angle EFG = 119°47'45" \angle FEG = 39°13'50"

FIND: \angle EGF = _____ (6 POINTS)

DISTANCE EH = _____ (6 POINTS)

DISTANCE FH = _____ (6 POINTS)

DISTANCE FG = _____ (6 POINTS)

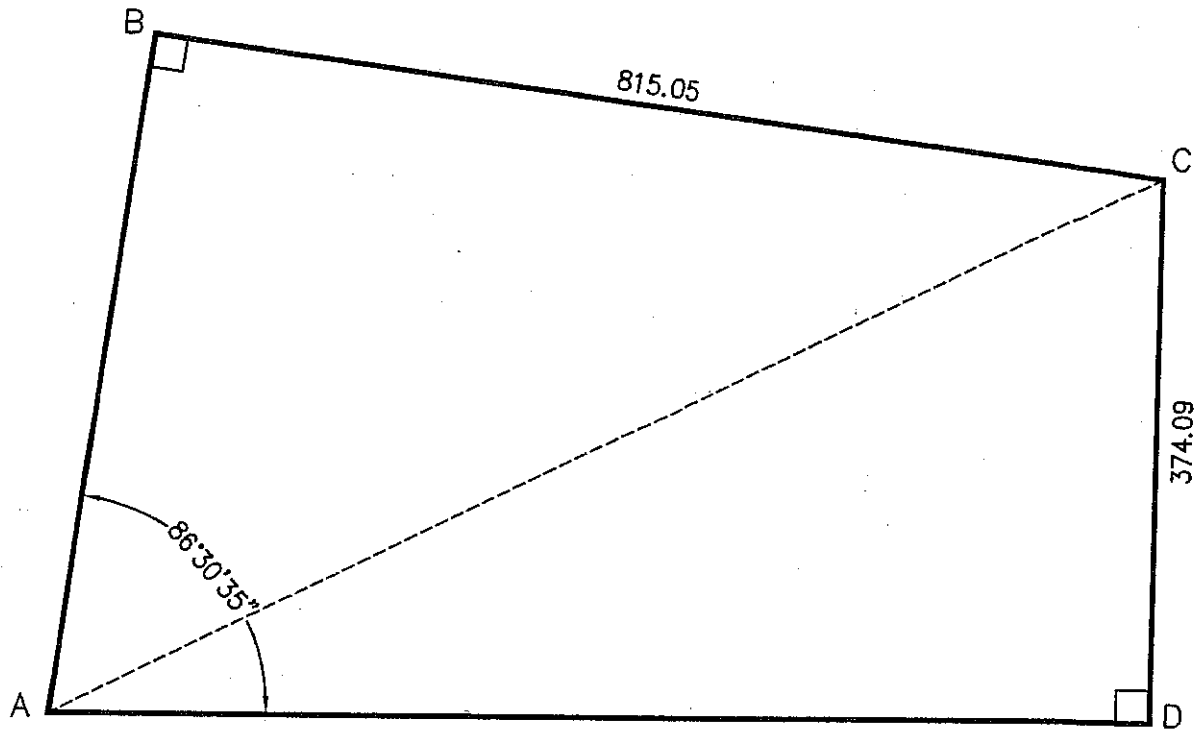
DISTANCE GH = _____ (6 POINTS)

REQUIRED ANSWER FORMAT

DISTANCES: NEAREST HUNDREDTH
 ANGLES: DEGREES-MINUTES-SECONDS
 TO THE NEAREST SECOND

PAGE TOTAL: _____ POINTS

TRIG-STAR PROBLEM LOCAL CONTEST



KNOWN: DISTANCE BC = 815.05 DISTANCE CD = 374.09
 \angle BAD = 86°30'35"

FIND: DISTANCE AB = _____ (10 POINTS)
DISTANCE AD = _____ (10 POINTS)
DISTANCE AC = _____ (10 POINTS)

REQUIRED ANSWER FORMAT
DISTANCES: NEAREST HUNDREDTH

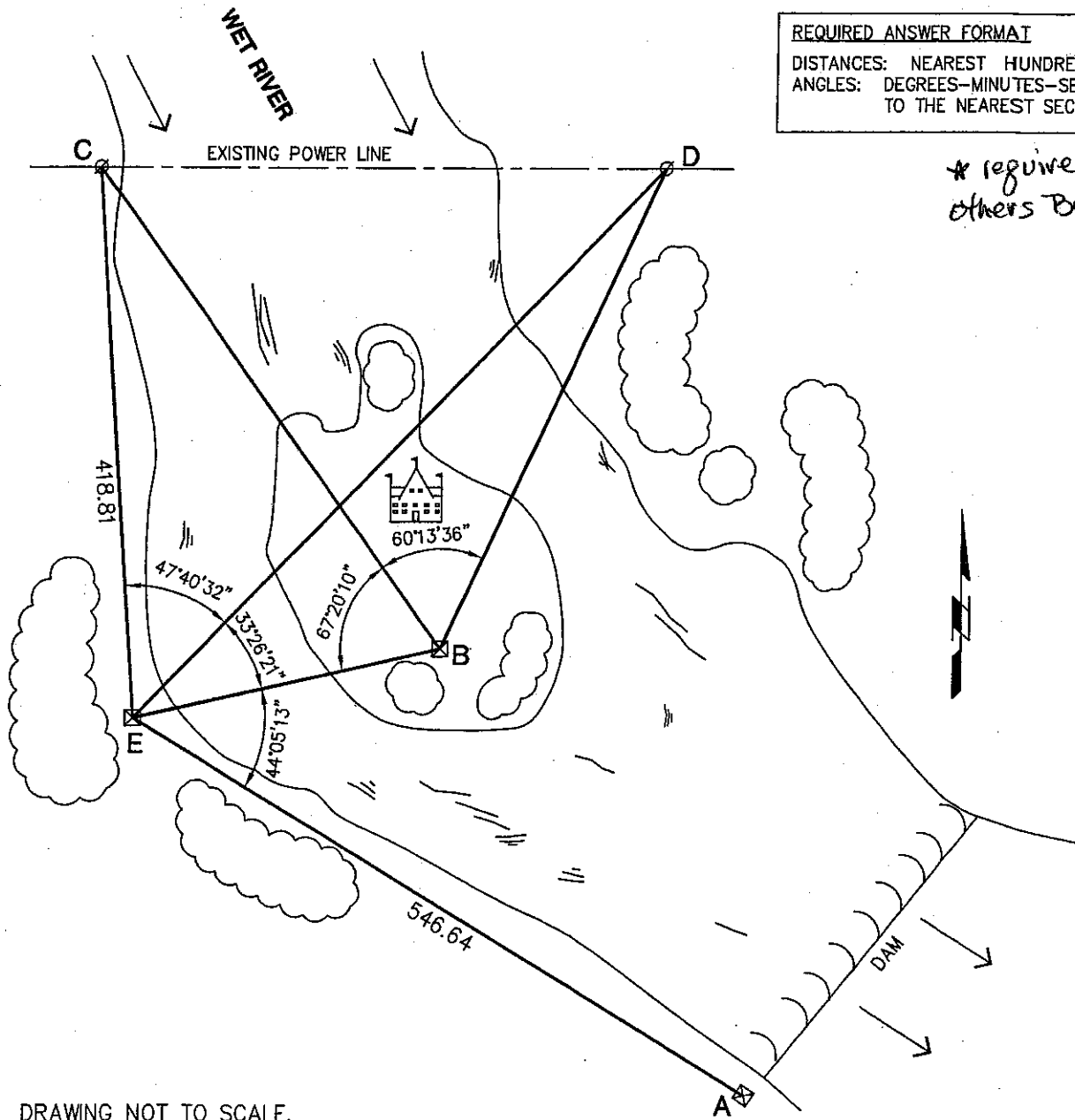
PAGE TOTAL: _____ POINTS

TRIG-STAR PROBLEM 3 LOCAL CONTEST

REQUIRED ANSWER FORMAT

DISTANCES: NEAREST HUNDREDTH
 ANGLES: DEGREES-MINUTES-SECONDS
 TO THE NEAREST SECOND

** required
 others BONUS!*



DRAWING NOT TO SCALE.

A GROUP OF INVESTORS HAS PLANS TO BUILD A RESORT ON AN ISLAND IN THE WET RIVER. THE ELECTRIC COMPANY WILL SUPPLY POWER TO A TRANSFORMER STATION (Point "B") AT THE RESORT BY CONSTRUCTING A GENERATING PLANT (Point "A") AT THE DAM DOWNSTREAM OF THE RESORT. THE TRANSFORMER STATION WILL NEED TO BE CONNECTED TO AN EXISTING POWER LINE WHICH CROSSES THE RIVER JUST NORTH OF THE ISLAND. USING THE INFORMATION IN THE DIAGRAM THAT WAS OBTAINED BY A SURVEY CREW; FIND THE FOLLOWING DIMENSIONS:

FIND: DISTANCE AB = _____ (10 POINTS) *

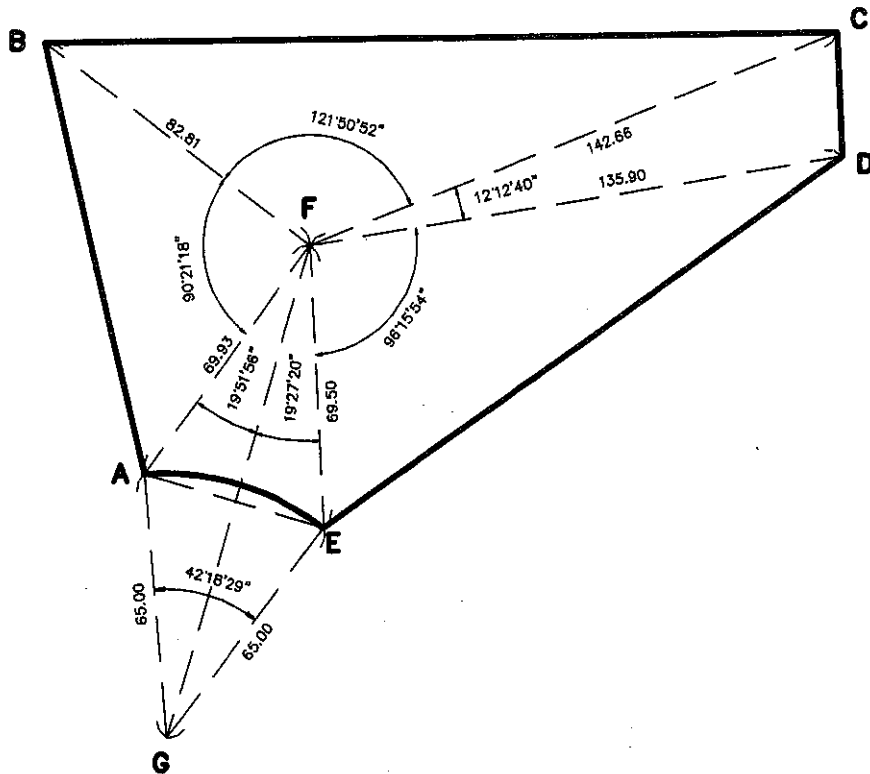
DISTANCE BC = _____ (10 POINTS) *

DISTANCE BD = _____ (10 POINTS) *

PAGE TOTAL: _____ POINTS

TRIG-STAR PROBLEM LOCAL CONTEST

ABC HOME CONSTRUCTION COMPANY HAS BEEN HIRED TO BUILD A NEW HOUSE ON LOT 22, AND HAS HIRED A SURVEYOR TO SURVEY THE LOT. THE SURVEYOR'S FIELD MEASUREMENTS ARE AS SHOWN. DETERMINE THE REQUIRED LOT DIMENSIONS BASED ON THE GIVEN FIELD MEASUREMENTS.



GIVEN: DISTANCE GA = DISTANCE GE = 65.00 ANGLE AGE = 42°18'29"
 DISTANCE FA = 69.93 DISTANCE FB = 82.81 DISTANCE FC = 142.66
 DISTANCE FD = 135.90 DISTANCE FE = 69.50 ANGLE AFB = 90°21'18"
 ANGLE BFC = 121°50'52" ANGLE CFD = 12°12'40" ANGLE DFE = 96°15'54"
 ANGLE AFG = 19°51'56" ANGLE GFE = 19°27'20"

- FIND: ARC LENGTH AE = _____ (6 POINTS)
 DISTANCE AB = _____ (6 POINTS)
 DISTANCE BC = _____ (6 POINTS)
 DISTANCE DE = _____ (6 POINTS)
 CHORD LENGTH AE = _____ (6 POINTS)

REQUIRED ANSWER FORMAT
 DISTANCES: NEAREST HUNDREDETH

PAGE TOTAL: _____ POINTS

TRIG-STAR ANSWER KEY LOCAL CONTEST

PAGE 1

$$\sphericalangle ACB = 40^{\circ}51'58''$$

$$\text{DISTANCE AB} = 512.41$$

PAGE 1

$$\sphericalangle EGF = 20^{\circ}58'25''$$

$$\text{DISTANCE EH} = 265.78$$

$$\text{DISTANCE FH} = 217.00$$

$$\text{DISTANCE FG} = 606.26$$

$$\text{DISTANCE GH} = 566.09$$

PAGE 2

$$\text{DISTANCE AB} = 424.50$$

$$\text{DISTANCE AD} = 839.38$$

$$\text{DISTANCE AC} = 918.97$$

2015-2016

$$\text{DISTANCE AB} = 410.76$$

$$\text{DISTANCE BC} = 448.41$$

$$\text{DISTANCE BD} = 401.98$$

pg 3 2017-2018

$$\text{ARC LENGTH AE} = 48.00$$

$$\text{DISTANCE AB} = 108.72$$

$$\text{DISTANCE BC} = 199.19$$

$$\text{DISTANCE DE} = 159.25$$

$$\text{CHORD LENGTH AE} = 46.91$$